

C.3.3.3. ICDF Design

Comment 217 : A Commentor noted that since the radioactive waste will be extremely hazardous for tens of thousands of years, a conservative risk assessment would consider a 500-year flood rates at 9,680 cubic feet per second (34% greater flow rate than 100 year), as opposed to a 100 year. Further, a 500-Year flood plus failure of Mackay Dam (built in 1917) would result in estimated flows of 9,700 + 54,000 cubic feet per second respectively. [CB-W]

Response: We agree with the Commentor concerning the need to consider a 500-year flood event during remedial design. The majority of the waste we anticipate disposing of in the ICDF will contain Cs-137 and Sr-90 contaminated soil and debris with half lives which through radioactive decay, will result in acceptable risk-based concentrations well within 500 years. The Agencies plan to consider a 500-year flood event when designing the engineered cover. However, the Agencies are not using the 500-year flood event as an ICDF siting criterion. The engineered containment barriers will be designed to control erosion, infiltration, and intrusion. With a flood, erosion of the containment structure is an issue along with infiltration. Both of these issues will be considered and factored into the design of the ICDF. In addition, we will evaluate historic high water elevations and potential future climatic events in our design assumptions.

Comment 218 : A Commentor stated that the ICPP as a whole is about as flat as a tabletop. He referred to a US Geological Survey (USGS) report released in 1998, acknowledging that the northern half of the ICPP would be flooded in a peak 100-year flood. USGS estimated that the ICPP would be under several feet of moving water and the Big Lost flow rate at 7,260 cubic feet per second. The detailed report map shows the northern half of the ICPP would be under as much as four feet of water. [CB-W]

Response: The proposed ICDF location is beyond the southern boundary of INTEC, and is not within the 100-year floodplain, as identified by USGS. Further, The engineered containment barriers (Caps) for the ICDF will be designed to control erosion. Concerning the four feet of water, the USGS report shows a depth of 4 feet of moving water encompasses the bottom of the existing drainage system (ditches) located in the northern part of INTEC, not flowing across the facility unrestricted.

Comment 219 : A Commentor expressed concern that given the value of the SRPA, the lack of natural protection offered by in situ soils and hydrologic conditions and the dangers of relying on manmade systems for waste isolation, the proposed Chem Plant on-site disposal facility is unsuitable. [L-W]

Response: The construction of the ICDF is partially dependent upon the natural protection offered by INEEL soils. During remedial design, it may be determined that the existing soils will need to be supplemented to achieve the design objectives. If this is the case, the supplement actions will be implement to meet the design objectives. This design requirement applies equally to commercial and government facilities. The issue is not whether contaminants exist above the sole source aquifer, it is whether the contaminants exist in an environment in which they may pose an unacceptable risk to human health and the environment.

Comment 220 : A Commentor discussed that the porous, coarse-grained soil deposits and shallow, permeable bedrock beneath the Chem Plant offer limited ability to attenuate contaminants and impede downward infiltration. Under such unfavorable natural conditions, the man-made liner system for the proposed disposal site would offer the only waste isolation barrier. Failure to successfully join the multiple panels comprising the liners, heavy equipment damage, degradation of liner materials by waste constituents or the simple passage of time could lead to unforeseen releases. Once in the fractured basalt, contaminant dispersion monitoring and corrective action would be difficult and expensive. [L-W]

Response: The operation of the ICDF is not dependent upon the natural protection offered by INEEL soils. Design requirements and construction procedures address the operational concerns mentioned by the Commentor. The WAC provide further assurance that the aquifer will remain protected. Commercial landfills are located above fractured basalt. Siting criteria for the ICDF (which is limited in terms of what wastes may be accepted) is not the same as that of a commercial facility, which accepts many forms of wastes.

Comment 221 : A Commentor asked about the design life for the ICDF liner and for the cover.
[SRA-W]

Response: Both the liner (bottom of disposal cells) and cover (engineered barrier; cap) materials for the ICDF will have design life requirements. The design life of the liner materials are grouped into two categories. The first category is the materials used for the leachate collection during the operational phase of the individual disposal cells. These leachate collection materials are the same as those used in the construction of RCRA Subtitle C facilities and have design lives of 30 years or more. The operational phase of the individual disposal cells is expected to be approximately 10 years. Proper cover design should minimize infiltration, thereby preventing the need for long term operation of the leachate collection system. The second liner category is the materials used for the material beneath the leachate collection system and on top of the basalt. For materials beneath the leachate collection system, natural, native, or natural analog materials will be used. These materials would have design lives of geological timescale (>1,000 years). These material will have sufficient design life to control the contaminant migrations until the level of contamination present do not present a risk to the environment. In the case of the engineered barriers (covers), the material of construction would be similar to the materials used beneath the leachate collection system. As design specifications are part of the remedial design process, these issues will be further evaluated during the remedial design.

Comment 222 : A Commentor stated that the concept of the ICDF is flawed and unacceptable. It does not afford sufficient protection to the Snake River Aquifer since it will eventually leak (refer to the recent discovery at Envirocare of 2500 gallons of leachate between the liners). The Commentor asked, how will INEEL manage/dispose of leachate from this facility? Bonneville county was not allowed to construct a municipal landfill over the aquifer, why should DEQ allow construction of a hazardous/PCB waste landfill over the same aquifer? DEQ should be consistent in their application of requirements to protect the aquifer. Will this landfill accept only PCB waste between 50 and 500 ppm PCBs, or will it accept >500 ppm PCBs? [C-W]

Response: We disagree with the Commentor. Currently, there are several municipal landfills sited over the SRPA. The ICDF will be designed, constructed, operated, and closed to remain protective of human health and the environment, including the SRPA, for at least 1,000 years. The Agencies goal is to protect the aquifer. Problems at Envirocare are not relevant to the ICDF design, operation, or closure. Leachate generated during the operation of the ICDF will be managed and treated at the SSST. The treated effluent may be used for dust suppression during operations. The ICDF will be designed to minimize the generation of leachate after closure. This is the reason for the actions identified in the ROD. Concerning PCB wastes, the ICDF will be limited to less than 500 mg/kg (ppm) non-liquid PCBs. Wastes containing free liquids will not be disposed in the ICDF.

Comment 223 : The INEEL CAB recommended that the ICDF be designed to avoid the effect of the probable maximum flood. The contaminants that would be disposed at the ICDF have radionuclides with very long half lives. Design to avoid the impacts of a 100-year flood may not offer sufficient protection.
[CAB-W]

Response: When evaluating the “probable maximum flood”, it is necessary to know the frequency of the event. Most of the contaminated materials (soil and debris) to be disposed of in the ICDF will remain unacceptable from a human health perspective for less than 500 years. The major effect on a landfill similar to the ICDF would be the effect of erosion of the engineered containment structure (cap). Groundwater generally is not greatly impacted (short-term increase in contaminant migration along with a decrease in contaminant concentrations). The engineered containment structure would be designed to deal with the effects of at least a 500-year flood. This will provide adequate protection for the ICDF from flooding effects along with protection of the SRPA.

Comment 224 : The INEEL CAB recommended that the ICDF final design be fully compliant with the Resource Conservation and Recovery Act (RCRA) substantive requirements. DOE may need to dispose of waste containing RCRA-listed contaminants at the ICDF. The design should accommodate that possibility to avoid expensive retrofitting in the future. [CAB-W]

Response: The ICDF will be designed to meet the design requirements for a RCRA Subtitle C hazardous waste disposal facility. Meeting the RCRA Subtitle C requirements allows for RCRA waste (listed and treated characteristic) to be disposed of in the facility. In addition, hazardous waste materials (hazardous, mixed, and LLW) from other INEEL CERCLA remedial and removal actions would be candidate materials for disposal in the ICDF. This will eliminate retrofitting the ICDF to meet RCRA requirements in the future.

Comment 225 : A Commentor asked, “Regarding the ICDF: How exactly will the design of the proposed ICDF prevent future percolation of contaminants into the groundwater?” [U-W]

Response: The ICDF will be designed to meet the RCRA Subtitle C minimum technical requirements and PCB Chemical Waste Landfill design requirements. Our Waste Acceptance Criteria will assume that contaminants will eventually leach out of the waste in the ICDF and migrate toward the SRPA. Therefore, we will limit our waste acceptance to wastes with contaminant levels that, even if the long-term leachate collection and management system were to fail, would not cause an MCL or unacceptable risk level exceedance in the SRPA, based on modeling.

C.3.3.4. ICDF Waste Acceptance Criteria

Comment 226 : A Commentor remarked that the ICDF Engineering Design and Waste Acceptance Criteria (WAC) must be developed with public involvement through a free and open discussion. Only un-containerized wastes that can be compacted during placement should be allowed so as to minimize subsidence caused by container decomposition. Biodegradable, VOC, collapsible, soluble, TRU, or Greater than Class C Low-level, and Alpha-LLW must also be excluded from the ICDF dump and sent off-site. Prior to completing the ICDF Title II Design, workshops should be convened for stakeholders to comment on the proposal. Waste acceptance criteria maximum contaminate concentration levels must be determined from waste sampling prior to being mixed with any stabilizing materials. In other words, “dilution is not the solution to pollution.” [CB-W]

Response: Only INEEL CERCLA waste that is non-containerized, compactable, and non-biodegradable are being considered for disposal in the ICDF without the need for pretreatment. Containerized and biodegradable wastes may require pretreatment and treatment, if necessary, to meet the waste acceptance criteria for disposal in the ICDF. In addition, no TRU waste or waste having concentrations of TRU constituents exceeding 10 nCi/g are being considered as candidate waste for disposal in the ICDF. Also, the waste acceptance criteria, along with the design, will be developed to ensure that the SRPA is protected from potential contamination from the ICDF. Further, the Agencies will keep the Community informed as to the progress and content of the remedial design through a series of Fact Sheets. In

addition, presentations and discussions with the INEEL CAB and/or Focus Groups will be held during the development of the design and construction of the ICDF. Concerning the last point, stabilization is a treatment technology used to reduce the leaching potential of a waste. It will not change the how wastes will be managed in the ICDF. Prohibited wastes, like TRU and Alpha LLWs will not be diluted so as to meet the waste acceptance criteria for the ICDF.

Comment 227 : A Commentor stated, "The volumes and contamination levels for the soil dump aren't clear. It is inappropriate to ask the public to sign-off on the soil dump before its waste acceptance criteria are known. Will the public have an opportunity to help develop and comment on the soil dump design and WAC?" [SRA-W]

Response: Under this ROD, soils and debris from CERCLA cleanup activities could be accepted into the INEEL CERCLA Disposal Facility. For the evaluation of remedial alternatives for Group 3 (Other Surface Soils), a volume of 82,000 yds³ was considered. The volumes from the various release sites can be found in Appendix A of the FS Report. Information on the maximum contaminant concentrations for the various release sites can be found in Section 5 of the RI/BRA Report. The actual chemical-specific waste acceptance criteria will be developed during the remedial design. However, general criteria have been identified in the ROD. The most important criterion is that the ICDF will only accept material such that the ICDF will not adversely impact the SRPA or surface receptors, over the long term. Others include: only CERCLA wastes; only non-liquid wastes; and no High Level, TRU or Alpha LLW, will be acceptable. During the remedial design activities, we will develop and issue Fact Sheets on the various cleanup activities under this ROD. In addition, we will be available to discuss the various remedial design and remedial action activities with interested public groups as appropriate.

Comment 228 : A Commentor was concerned about being asked to comment on the ICDF when they didn't know what the waste acceptance criteria were. [MMS-W-W]

Response: For the Other Surface Soils group, a conceptual ICDF was evaluated as a remedial alternative. In evaluating the ICDF, candidate material for disposal in the ICDF were identified and evaluated (see Appendix C of the FSS Report, which is contained in the Administrative Record). The actual waste acceptance criteria will be developed during the remedial design. However, the waste acceptance criteria will limit the material acceptable for disposal such that the ICDF will not adversely impact the SRPA or surface receptors.

Comment 229 : A Commentor asked about, Page 28, Alternative 4A, Preferred Alternative. 4th paragraph, of the Proposed Plan and wanted a definition on what wastes are "suitable for disposal" at this disposal facility. [C-W]

Response: Only waste materials from INEEL CERCLA remedial and removal actions which are primarily mixed LLW would be acceptable for disposal in the ICDF, provided that the waste meets the acceptance criteria. The in-AOC waste would be required to meet the acceptance criteria for the ICDF. Waste materials (soils and debris) that do not have the potential to adversely impact the SRPA from contaminants leaching of the waste would be candidate materials for disposal (suitable for disposal). Further, wastes would be required to meet the requirements of Phase IV LDRs, as appropriate. Pre-treatment of wastes, as necessary to meet the acceptance criteria (stabilization for subsidence or leaching control), would be performed prior to disposal.

Comment 230 : One Commentor questioned the quantities, concentrations and size of the proposed ICDF? Also, will the facility serve as a retrievable storage area? Is there any plutonium going into the ICDF? So are you going to follow the 100 nCi standard? If we use 10 nCi/g, how many billions of

particles? The thing on the situation was legally, you could take less than 100 nCi transuranics from the Tank Farm, putting in this official RCRA endorsed low-level dump; right? [PR-TT]

Response: The proposed ICDF, which would be a permanent disposal site, designed, constructed and monitored in accordance with applicable hazardous waste minimum technology design requirements, is expected to encompass less than 100 acres upon closure including a buffer zone. The maximum allowable radionuclide concentrations will be determined in the RD/RAWP. However, no contaminants will be placed in the ICDF, which would exceed the design capabilities of the facility and threaten the underlying SRPA. For TRU contaminants, which include Pu-239, concentrations above 10 nCi/g (alpha low level) will not be accepted.

Comment 231 : A Commentor questioned whether tank farm soils, if excavated would go to the ICDF? [PR-TT]

Response: Our Group 1 interim action does not envision the excavation and disposal of tank farm soils. The ICDF will not accept TRU wastes above 10 nCi/g nor will it receive HLW. Stabilization of ICPP soils would only be to the extent necessary to prevent future leaching and subsidence. There are LLW soils and debris currently stored at INTEC (Sites CPP-92, -96, -98, and -99) that originated from within the Tank Farm area. This soil and debris is candidate material for the ICDF, provided the material meets the ICDF acceptance criteria. For soils and debris within the WAG 3 AOC that have triggered placement, the material is subject to Hazardous Waste Determinations and LDRs. For the soils remaining in the Tank Farm, OU 3-14 will evaluate the risks and potential remedial actions.

Comment 232 : A Commentor stated, "This, to me, is the whole problem with piece mealing the whole situation. And even in the big picture, if every radionuclide leaked that was there, it would meet federal standards because the aquifer is so large. And the big picture is that's why they view INEEL as the perfect place to have a 200-acre plutonium dump that they talk about is their event goal." [PR-TT]

Response: Protection of the SRPA is one of the primary objectives of the OU 3-13 project. As there is already contamination in the SRPA that will require remediation, the ICDF will not be allowed to adversely impact the aquifer. Additional impacts would only make restoration of the aquifer harder and more costly. Based on this, the maximum concentrations of leachate from the ICDF will be limited to control impacts on the aquifer so that the aquifer is not contaminated above drinking water standards from the ICDF. From the big picture standpoint, the impacts from the ICDF are considered in the overall (cumulative) impacts for WAG 3.

Comment 233 : A Commentor stated, "Literally, our water supply is large, but the medical view of radiation is to -- the less human-added exposure the better, and with zero being the safest limit. And we have a chance to contain all this material, and yet you're going through calculations you know will allow you to rebury it. That's my problem with the whole cleanup. You actually let it leak and it still meets your standards. That's why mixing it with cement is acceptable to you and putting it over the water supply is acceptable to you." [PR-TT]

Response: The ICDF is for the consolidation of existing contaminated soils into a facility designed, constructed, operated, and closed to control and minimize the leakage (leachate) from the material disposed in the cells. The level of radiation that we are designing to be protective of human health is less than 1/20th the dose typically received by the general public in the nearby communities. The disposal cells will prevent the uncontrolled leakage of contamination to the SRPA. Stabilization of INTEC soils will be performed to the extent necessary to prevent future leaching and subsidence.

Comment 234 : A Commentor noted that the Agencies were looking at a 1000 years institutional life and compared this to concerns at Pit 9, with Plutonium concentrations above 100 nCi. [PR-TT]

Response: The 1,000 years for the minimum design life of the engineered containment structure (cap) is not related to the acceptable plutonium concentrations for the ICDF. The 1,000 year value is the time that containment would be necessary to deal with most of the contaminants through radioactive decay. For plutonium and other long-lived radionuclides, concentrations would be limited and other necessary controls and/or actions implemented to limit the concentrations in the leachate to protect the SRPA for adverse impacts. The protection on the SRPA would not end at 1,000 years. In addition, the ICDF would be limited to accepting TRU constituents at levels below 10 nCi/g.

Comment 235 : A Commentor stated, "I just want to make this for the record that this is a permanent solution forever. That there will be a cap or a liner at the bottom and it will be properly capped and contaminated soils will be placed there, initially, in the old percolation ponds. And we believe that will be safe for a thousand-plus years. Other things will go in some of the soil including concrete from breaking up buildings, contaminated equipment, and contaminated structures broken up into bite-size pieces. The volume will be contaminated soil, but, in particular, if the choice is to tear buildings down, then certainly the debris from those buildings, some or all of it is candidate to go in there. Some cannot go there because of too-high levels of radioactivity to some other place. So the ICDF is a generalized disposal facility. It is a centralized facility for other clean up areas, TAN in particular, and anything else that does produce soils or debris will go there. They will not have their own separate repositories. That largely is due to economic arguments." [DK-TT]

Response: The Commentor is correct. The ICDF would be closed with the construction of an engineered containment structure (cap). The actual location of the disposal cells, within the ICDF area, will be determined during remedial design based on technical, regulatory, and financial factors. Wastes that could be accepted at the ICDF include both soil and debris. The acceptance criteria would also limit the concentrations of contaminants to protect the SRPA along with potential surface receptors. The ICDF may be used by other WAGs. Disposal of soil and debris at the ICDF from the other WAGs would only occur if this remedial option is selected through the CERCLA process by the other WAGs.

Comment 236 : The INEEL CAB recommended that the ICDF waste acceptance criteria be sufficiently restrictive to protect the aquifer. The criteria should be constructed using a long-term point of view with an appropriately designed public involvement process. INEEL waste generated by the cleanup program that does not meet the criteria should be disposed of off-site. [CAB-W]

Response: The waste acceptance criteria for the ICDF will be primarily developed to protect the aquifer from unacceptable levels of contamination. Peak contaminant concentrations impacting the aquifer will be evaluated regardless of when the peak occurs in time. This will provide the aquifer with long-term protection from the impacts of the ICDF. During the development of the waste acceptance criteria, fact sheets and other documents will be developed to inform the public. Any INEEL CERCLA waste not meeting the acceptance criteria will be disposed of at other disposal facilities including off-site disposal, if necessary.

C.4. Group 4: Perched Water

Comment 237 : The INEEL CAB recommended that DOE conduct further study of methods for replacing the percolation ponds and that the ROD provide much more detailed information on this issue. [CAB-W]

Response: In the evaluation of alternatives for the INTEC perched water, a replacement facility (new percolation ponds) was evaluated. Additional alternatives for replacement of the existing percolation ponds were evaluated and the information is contained in the Administrative Record. A new set of percolation ponds will be constructed to deal with the existing service waste discharges. If necessary, these ponds will be operated under this ROD until a new wastewater land application program (WLAP) permit to operate is obtained. Upgrading or additional capacity would be conducted under a separate project in support of INTEC facility operations. As recommended the ROD contains more details concerning the timing issue and the implementation of the replacement facility for the existing percolation ponds.

Comment 238 : A Commentor remarked that for Group 4, the perched water, 24 percent of the recharge was from the Big Lost River. Therefore, it seemed that the chances of doing something with the Big Lost River are pretty high because it was a quarter of the recharge. The Proposed Plan only stated that dealing with the Lost River, which is in Phase 2 was just a probability? [DK-TT]

Response: We agree that additional actions may be necessary to reduce the infiltration of water at INTEC to de-water the area of the perched water. Removing the existing Percolation ponds represents over 2/3rds of the recharge. Modeling shows that this may in itself be sufficient. If not, based on monitoring results, Additional infiltration controls will be implemented which will reduce the river recharge in the stretch affecting the perched water and thus eliminate the river as a source of recharge.

C.4.1. Group 4 Description

Comment 239 : A Commentor questioned the consistency of Page 32 Perched Water, Alternative 1 of the Proposed Plan. "It first states that "controls will remain in place until 2095." Then it backpedals and states that perched water monitoring will only take place for 20 years after the ponds are taken out of service." ... "What if perched water is still present 20 years after the ponds are taken out of service?" [C-W]

Response: For this non-selected alternative (Alternative 1: No Action with Monitoring), the percolation ponds were assumed to remain in service until all operations at INTEC had been completed. Treatment of the waste at INTEC would be completed by 2035 and a period of 10 years would be required to complete the facility disposition activities. This would result in the percolation ponds being removed from service in 2045. In the computer modeling, a period of approximately 14 years would be required for the perched water to drainout (change to an unsaturated zone). Perched Water monitoring would continue for 20 years following the removal of the percolation ponds from service. Although the monitoring period would end before 2095, the access (institutional) controls would remain in effect until at least 2095. Should the perched water not drainout as expected, the monitoring would be extended. This extended monitoring would continue for a period after the drainout has occurred.

Comment 240 : A Commentor stated that there was no mention that most of the contamination is the perched water was believed to have come from the tank farm nor was there mention that the perched water was contaminated with RCRA listed waste. [C-W]

Response: The Commentor is correct. Waste containing listed waste constituents were spilled in the Tank Farm soils. Some contaminants have migrated from these soils downward to the perched water bodies and this water may contain RCRA-listed waste constituents.

Comment 241 : A Commentor stated that at Pages 34 and 35, of the Proposed Plan, short-term and long-term effectiveness, no mention was made of the contaminants already present in the basalt and

interbeds and their impact on the perched, and deep, aquifers. The Commentor further asked, "What K_d studies have been done to support your answer?" [C-W]

Response: The Commentor is correct in stating that there is known contamination present in both the basalt and interbed materials at INTEC (ICPP). The computer modeling that was conducted for the RI/BRA, FS, and FSS Reports did not consider the source term present in either the basalt or interbed materials. Instead the source terms modeled for most release sites considered the contamination remaining in the surface soils. For release sites where the constituent characteristics and volume of the liquid released to the surface soils were known or estimated, the source terms for these sites considered the released contaminant masses. In addition, these liquid release sites are the largest releases at INTEC. Although this does result in an uncertainty in the source term mass and subsequent modeling calculations, it should not significantly alter the results obtained from the modeling. Additional analysis will be conducted under OU 3-14 on source terms in the Tank Farm area and this analysis may be able to semi-quantitatively evaluate the impact of the source terms contained in the basalt and interbed materials. For the computer modeling, default retardation factors (K_d), which are generally conservative, were used. The K_d values used in the modeling are presented in Appendix F, section F-5, of the RI/BRA Report. Studies to refine the transport mechanisms and rates will be conducted under the OU 3-14 project.

C.4.2. Group 4 Alternatives

Comment 242 : A Commentor stated that the perched water preferred Alternative 2 alone did not meet regulatory requirements unless combined with Alternative 3 (pump and treat). Even so it would partially meet the requirements with the following exception that the existing ICPP percolation ponds will be taken out of service and replaced with new "like for like" percolation ponds not over the existing perched water. The Commentor felt that the contamination of the perched water currently was largely the result of using unlined percolation ponds to dispose of process waste. [CB-W]

Response: If the Perched water was capable of sustainable drinking water at the future residential use hypothetical time frame, the Commentor would be correct that the Ground Water Protection Standards would not be met without implementing Alternative 3. However, the Perched water is not a sustainable source of drinking water. It largely exists because of DOE operations which discharge more water into the soil than can naturally drain, thus resulting in a perched water zone. The perched water does serve to conduct leachate migrating from surface sources to the SRPA. This is why removal of the existing percolation ponds is an important phase of the remedial action.

Also, while it is true that disposal of radiological and hazardous waste occurred in the past at levels which impacted the aquifer, these impacts are what led to the INEEL facility being listed on the National Priority List (NPL) with cleanup being performed under the FFA/CO. Current waste management operations are covered under state and federal programs, which are outside the scope of this action but are designed to protect health and the environment.

Comment 243 : A Commentor remarked that the Plan discounted the Perched Water as "No risk because perched water is not capable of sustaining a pumping rate needed for future domestic water supplies; therefore, it is not a source of potable water." Yet in ICPP Plan Alternative 3 (not the preferred alternative), DOE acknowledges a perched water pump/treat rate of 46 million gallons over 25 years. Applying simple arithmetic that works out to a daily pumping rate of 5,041 gallons per day, which is likely adequate to sustain over ten households? [CB-W]

Response: We are sorry for the confusion on this issue. The Perched Water is primarily sustained by the pumping and disposing of approximately 2 MGD in the existing Percolation Ponds. If the Percolation Ponds are removed from the vicinity of the perched water, the perched water would dissipate within less

than twenty years. In the evaluation of Alternative 3 for the Perched Water, the rate of withdrawal from the perched water varied over time (starting high and reducing) to account for the reduction in the available perched water. Also, the amount of contaminant mass removed by Alternative 3 is insignificant compared to the amount of contamination present. Our use of the 100-year future residential scenario and commitment to replace or relocate the Percolation Ponds will result in the availability of the SRPA for future drinking water consumption. The Perched Water is not capable of providing a sustainable drinking water supply, if DOE's use of the Percolation Ponds is ended. Based on the evaluation of alternatives, we concluded that Alternative 2 (Institutional Controls with Aquifer Recharge Control), which includes removing the existing percolation ponds from service, best satisfied the evaluation criteria.

Comment 244 : A Commentor stated that at Page 33, Perched Water (Group 4) - Alternative 3 of the Proposed Plan, "... regarding removal and treatment of 46 million gallons of perched water. I recognize that very few alternatives are available for dealing with contaminated perched water, however, a back of the envelope calculation shows that in order to remove 100% of the Sr-90 estimated to have been released to the environment (19,400 Ci) would require that the average concentration of perched water removed be 100 million pCi/L. Therefore, to remove only 1% of the Sr-90, the average concentration will have to be 1 million pCi/L, which at best could decrease the predicted future risk by 1%. Although several wells have had measured concentrations in the hundreds of thousands of pCi/L, the average concentration is much lower and none have approached 1 million pCi/L. Therefore, this alternative cannot possibly provide any measurable risk reduction, regardless of the cost. The alternative should not be given credibility by including it as an alternative. By quantifying the risk reduction, the ineffectiveness of this alternative could have been quantitatively shown and eliminated." [JM-W]

Response: Alternative 3 was included for Group 4 (Perched Water) to present a range of alternatives and to include at least two viable alternatives. Alternative 3 is a more aggressive approach to the remediation of the Perched Water than Alternative 2. We also feel that Alternative 3 would result in an insignificant risk reduction beyond the results obtained by implementing Alternative 2.

Comment 245 : A Commentor questioned the technical and administrative implementability the Perched Water (Group 4), Alternative 3, given the discontinuous nature of the perched water at INTEC. [JM-W]

Response: Alternative 3 was included for Group 4 (Perched Water) to present a range of alternatives and to include at least two viable alternatives. Alternative 3 is a more aggressive approach to the remediation of the Perched Water than Alternative 2. We believe that Alternative 3 is an implementable alternative, but would only result in a minor risk reduction if implemented.

Comment 246 : A Commentor pointed out that on Page 35, Perched Water (Group 4) - Table 6 and sidebar, of the Proposed Plan, under Alternative 2 the Net Present Value is given as \$35.6M but in the sidebar it is given as \$20.0 M? [JM-W]

Response: We are aware of the typographical error, but unfortunately were unable to correct it before the release of the Proposed Plan. The correct NPV cost for Table 6 is \$20.0M.

Comment 247 : A Commentor pointed out that on Page 33, Alternative 2, the last sentence refers to the OU 3-14 RI/FS studying the effects of the Big Lost River and Sewage Treatment Plant (STP) on the perched water in addition to the tank farm. He stated, "If a strong connection exists between the tank farm and the perched water, then the perched water site should be removed from this Proposed Plan and included in the OU 3-14 Plan and ROD." [C-W]

Response: We are sorry for the confusion. Under the OU 3-13 project, the impacts of the Big Lost River (BLR) and Sewage Treatment Plant (STP) would be investigated and evaluated for impacts on the perched water during the perched water remedial action implementation. The computer modeling conducted for OU 3-13 showed a linkage between the various sources of water (percolation ponds, BLR, STP, etc.) infiltrating the subsurface and the perched water bodies. Operable unit 3-14 will use the existing information from OU 3-13, including removal of infiltrating water source to evaluate localized SRPA contamination within the INTEC fence line.

Comment 248 : A Commentor pointed out that on page 36, 1st partial paragraph. Phase 2 of the Proposed Plan addresses diverting or lining the Big Lost river and/or taking action on the STP perched water, rather than evaluating under OU3-14. [C-W]

Response: The scope of OU 3-14 has changed since the project was initially discussed. Under the OU 3-13 project, the success of removal of the Percolation Ponds will be assessed against the expected dewatering of the Perched Water. If the goals are not achieved, Additional infiltration controls will be implemented which will include lining of the BLR. It is not expected that relocation of the STP is necessary given its small contribution to recharge.

C.5. Group 5: Snake River Plain Aquifer

Comment 249 : A Commentor was concerned that the percolating ponds will still be running and that contaminants in them were flooding or going into the aquifers. [JJ-TM]

Response: We share the Commentor's concern regarding the percolation ponds and their affect on the migration of contaminants based on their present location. This is why this action will require the shutdown of the ponds at their current location and relocation.

Comment 250 : A Commentor stated their belief that the Proposed Plan needed to take a fundamentally different view on how to protect the SRPA. The policy towards protecting the aquifer should be the overriding alternative looked at and other alternatives should flow out of that. [SR-TB]

Response: We agree with the Commentor in that protection of the SRPA is a primary objective in the restoration of the INEEL. Also, with the SRPA, a sole source aquifer, protection of the aquifer is a primary concern for remedial actions. The remedial alternatives that were developed and evaluated considered the impacts on the SRPA. With this in mind, remedial alternatives that do not adversely impact the SRPA are viable alternatives for consideration.

Comment 251 : A Commentor stated that in addition to serving drinking water needs, the SRPA provides vast quantities of water for Idaho agriculture and stated that competing demands for water on Idaho and other western water sources will certainly intensify over the proposed 100-year cleanup timeframe. [L-W]

Response: We agree with the Commentor that water is a very valuable commodity. Most of the water extracted from the SRPA at the INEEL is returned to the aquifer. Under this ROD, the SRPA area associated with INTEC operations outside of the INTEC fence will be restored to drinking water standards. This will make the aquifer useable after 2095 for other activities.

Comment 252 : A Commentor asked, "How widespread is the contamination in the plume? Is there going to be an attempt to retrieve and contain this contamination, or is it just going to be monitored and assumed to be below federal standards?" [PR-TT]

Response: Our evaluation and modeling of the contaminant plume in the SRPA extends approximately 8 miles beyond the INEEL site boundary, however, contaminant concentrations above drinking water standards do not extend beyond the INEEL site boundaries, nor are they expected to in the future. We will implement a contingent action to insure that the aquifer is acceptable for drinking water consumption within 100 years. As necessary we will retrieve contaminants to insure this goal of aquifer restoration is met. Monitoring of the SRPA will be performed until the Agencies determine that there is no longer a risk of MCLs being exceeded after 2095. This will be evaluated in the 5-year reviews.

Comment 253 : A Commentor questioned where the drinking water standards were to be met in the SRPA. [DK-TT]

Response: Following the year 2095 restoration timeframe, the SRPA will be restored (remediation of the WAG 3 groundwater plume) to drinking water standards in the INTEC operations impacted portion of the SRPA outside the current INTEC fence line.

C.5.1. Group 5 Description

Comment 254 : A Commentor stated that there was insufficient information presented on I-129 distributions to select a remedy for the aquifer. The model predicts possible concentrations, which are greater than the drinking water standard, yet no data exists to support the theory that the HI interbed exceeds the drinking water standard. The Commentor further stated that it was absurd to propose a remedy that costs \$39.8M (NPV) or \$56.2 (1997 dollars) based on a model prediction. The Agencies should first sample the HI interbed near the injection well and then determine if there really is a problem. Further, the Proposed Plan does not state whether any reasonable or workable treatment alternatives were evaluated besides pumping and treating with ion exchange, which currently will not work cost effectively. The Proposed Plan does not mention whether a Technical Impracticability waiver was considered. The Commentor stated, "I would rather see my tax dollars going to a TI waiver than this absurd and excessively costly pump and treat remedy." [A-W]

Response: The information presented in the Proposed Plan is only a summary of the information contained in the RI/BRA, FS, and FSS Reports, which can be found in the Administrative Record. Contained in these documents are the details concerning contaminant concentrations and distributions (vertical and horizontal). The Commentor is correct in that the model predicts that there are concentrations greater than the drinking water standards, but it should be pointed out that actual samples collected and analyzed by the United States Geological Survey (USGS) exceed the drinking water standards. In the model, the long-term location of the I-129 is predicted to be found in the HI interbed. Part of the remedial action under Alternative 2B is to sample the SRPA at various depths to determine if there is significant I-129 contamination in the HI interbed and other vertical and horizontal locations. The Commentor is not correct in that the active remediation of the aquifer will cost \$56.2M (1997 dollars). This cost estimate includes the long-term monitoring of the SRPA that will be required regardless of whether the HI interbed is extensively contaminated or not. The active remediation portion of the cost estimate amounts to \$28.2M which includes the installation of extraction wells, treatment facility, treatability studies, and associated costs. Under OU 3-13, remediation of the SRPA within the INTEC fenceline, including the area near the injection well, was not evaluated or analyzed. A final evaluation along with decision on the SRPA, including the area near the injection well, will be conducted under the Tank Farm RI/FS (OU 3-14). In addition, other alternatives including treatments will be evaluated and analyzed for the SRPA in the OU 3-14 RI/FS. It is true that the only treatment options discussed in the Proposed Plan was the pump and treat technology. However, it should be pointed out that other technologies were considered and eliminated from further consideration in the beginning of the FS Report. During the development of the FS and FSS Report, discussions concerning a Technical Impracticability (TI) waiver were held. Ion exchange is not the only physical/chemical treatment option

available. Given the small flow rates expected, evaporation of the pumped water and management of the residual sludges on-site is also a viable option. We will perform treatability studies prior to implementing the contingent remedy. If it is determined that the remedy cannot be implemented, a TI waiver for the INTEC SRPA groundwater plume, will be pursued.

Comment 255 : A Commentor stated that of the 39 aquifer well sampling results (from 1995) presented in the RI/FS, only 4 wells had concentrations greater than the detection limit. Also, none of them were statistically above the legal MCL of 1 pCi/L. [JM-W]

Response: The Commentor is not correct. Data obtained in 1995 for I-129 is not useable in that the detection limit was not low enough to determine if I-129 exceeded a concentration of 1 pCi/L. For evaluation and the decision process, the USGS analytical data for I-129 from 1990-1991 were used. In the USGS data, 10 wells exceeded a concentration of 1 pCi/L for I-129. It should be noted that these are open interval monitoring wells. In the computer modeling, the aquifer was modeled as discrete layers. As such, mixing during sampling was not taken into account to determine risk levels.

Comment 256 : A Commentor stated that because the interbed sediment permeabilities are relatively low, a receptor would not pump water from the interbed. Therefore, if the I-129 is in fact trapped in the low permeability sediments, no receptor will drink the water. If the natural water filter exists and is operating as simulated in the computer model, it is good for the Snake River Plain water quality. [JM-W]

Response: It is recognized that removal of water from the interbed area would be problematic. If high levels of contamination occur in the interbed, remediation may be required. However, extraction of contaminated water from the highly contaminated zone would need to be at a sustainable rate of at least 0.5 gpm, for future use.

Comment 257 : A Commentor stated that if the I-129 is not trapped in the sediments, then the model hypotheses are incorrect. If I-129 is not trapped in the interbed, and the a computer model would predict that I-129 concentrations are significantly lower than the current models predicted peak concentrations. Under this scenario, I-129 concentrations would probably not be predicted to be above the MCL of 1 pCi/L in year 2095. [JM-W]

Response: If high levels of I-129 are not found in the interbed, or other low permeability material, the contingency would not need to be implemented as the aquifer would be restored to drinking water standards (MCLs) prior to 2095 by natural attenuation.

Comment 258 : A Commentor stated that the predicted I-129 peak concentrations in year 2095 corresponded to a 2 in 100,000 risk level (see Table 1, page 18 of the Proposed Plan) which is significantly below the risk based action level of 1 in 10,000. The 2 in 100,000 risk level is a very conservative estimate because it assumes the future receptor will pump from the relatively low permeability (high I-129 concentration) interbed rather than the high permeability (low I-129 concentration) basalt. Therefore, this contingent remediation plan is not risk based but rather MCL based on water that, in all probability, would not be pumped from the aquifer. [JM-W]

Response: An acceptable risk level of 1 in 10,000 includes all the contaminants of concern (total carcinogenic risk). In addition to carcinogenic risk, state and federal drinking water standards (MCLs) must be achieved so that the water can be consumed. Both of these standards must be met. The SRPA is required to be restored to the drinking water standards (MCLs) by 2095.

Comment 259 : A Commentor stated that based on the information presented in the supporting reports, I-129 does not appear to be a groundwater COC and the contingent remediation proposed for Group 5 SRPA is not needed. [JM-W]

Response: The SRPA is required to be restored to the drinking water standards (maximum contaminant levels: MCLs) by 2095. The MCL for radionuclides like I-129 is 4 mRem/yr is the standard for total (beta) and (gamma) emitting radionuclides. The major contaminants in the SRPA are considered as COCs and include I-129 and Sr-90.

Comment 260 : A Commentor stated that at Page 15 of the Proposed Plan, under “Snake River Plain Aquifer”, mercury is listed as a COC, both prior to and after 2095. Based on the mercury modeling results comparison with the field data (shown in the Chapter 7 of Appendix F in the RI) the RI model significantly over predicts the mercury concentrations. Of the 36 wells presented, sampling results for only three wells showed mercury concentrations above the detection limit (0.1 ug/L). Of the three, only one is clearly above 0.1 ug/L (based on the reporting uncertainty). The RI/FS model shows concentrations as high as 8 ug/L, but there is no data to support this, indicating that the model significantly over predicts current mercury concentrations. [JM-W]

Response: The computer modeling predictions, when compared against the measured values generally are under-predictions not over predictions. The highest levels of mercury predicted occur in the vicinity of the injection well. There are no sampling locations near the closed injection well to measure the concentrations against and compare against the predictions.

Comment 261 : A Commentor stated that at Page 15, under “Snake River Plain Aquifer,” of the Proposed Plan, chromium is listed as a COC prior to 2095. As discussed in the RI, chromium is a TRA contaminant which modeling shows could mingle with the INTEC contaminant plumes downgradient from INTEC. Therefore, chromium is not an INTEC contaminant of concern and should not be listed as such. [JM-W]

Response: The Commentor is correct. Chromium is a COC for the TRA groundwater plume. Chromium was included and shown in the OU 3-13 evaluation for completeness (cumulative impacts) of aquifer risk. Post 2095 chromium is not a concern at INTEC. As such, restoration of the aquifer is not needed for chromium.

Comment 262 : A Commentor remarked that RCRA listed waste entered the aquifer through injection well discharges. [C-W]

Response: RCRA hazardous constituents are known to have been injected down the well. The issue that hazardous wastes were injected is not determined in the remedial investigation. If further information results in changed information, the changed information will be evaluated and appropriate changes will be made to the remedies.

Comment 263 : A Commentor asked how far downgradient will production wells be protected and what contaminant(s) are these wells threatened by? [C-W]

Response: Restoration of the SRPA, under this ROD, will deal with the contaminated groundwater outside of the INTEC fenceline as an interim action. The area in the SRPA exceeding either the safe drinking water standards (MCLs) or risk based concentrations from INTEC releases will be remediated to acceptable levels. Currently, the area of concern in the SRPA extends from INTEC to north of CFA. For this contaminated area, the COCs are generally Sr-90 and I-129.

C.5.2. Group 5 Alternatives

Comment 264 : A Commentor stated that the Snake River Plain Aquifer (Group 5) should be remediated with a pump and treat (Alternative 3) for the same reasons the perched water should be removed and treated. [CB-W]

Response: The preferred remedy for the SRPA that was presented in the Proposed Plan is protective and will result in extraction and above-ground treatment, as necessary, to achieve aquifer usability within 100 years. There are some significant differences between the preferred Alternative 2B and Alternative 3. In the case of Alternative 2B, contamination would be removed, if necessary, from the areas within the SRPA which would not be restored to drinking water standards or risk-based levels without active remediation. For Alternative 3, contamination would be removed, if necessary, across the entire contaminated region of the SRPA. The timeframe for both alternatives to restore the SRPA is the same (year 2095). For the SRPA, Alternative 2B is the most cost-effective alternative, while reducing the risk to acceptable levels, evaluated. Based on this we concluded that Alternative 2B (Institutional Controls with Monitoring and Contingent Remediation) best satisfied the evaluation criteria.

Comment 265 : A Commentor questioned the Proposed Plan's conclusion that treatment of contaminated groundwater is not cost-effective if the assumption were tested against future water value projections. [L-W]

Response: The selected alternatives for the perched groundwater and SRPA will meet RAO's and insure that the SRPA is protected for future generations. The question of cost-effectiveness relates to the time versus cost for additional measures to remove contaminants from the SRPA and perched groundwater.

Comment 266 : A Commentor stated that Alternative 2B for the SRPA includes provisions for pumping groundwater from a low permeability layer. However, pumping water from low permeability layers when those layers are surrounded by higher permeability layers is not feasible. The Commentor recommended that the Agencies select Alternative 2A. [CC-W]

Response: Alternative 2B does have a contingent active remediation component for the portion of the SRPA sufficiently contaminated that active remediation may be necessary to restore the aquifer to drinking water standard at the end of the restoration timeframe (i.e., 2095). Based on the groundwater modeling that was conducted in support of both the RI/BRA and FS Reports, the long-term contamination in the aquifer is in the low permeability zone surrounded by higher permeability zones. This does present a challenge in the extraction of the contaminated porewater. Removal of the contaminated porewater will not be easy. However, the trigger level (monitoring criteria) has a concentration value 11 pCi/L in 2000) with a specified rate of extraction of at least 0.5 gpm continuous. Extraction of 0.5 gpm from the low permeability zone within a well is not highly probable. As a result, water for the high permeability zones will be bled into the extraction area of the monitoring well to allow for an extraction rate of 0.5 gpm. The mixed water would then be used to demonstrate whether active remediation would be required. The purpose of the aquifer restoration is not to restore it to *pristine conditions*, but to restore the aquifer to acceptable levels (drinking water standards; MCLs). With the bleeding of the high permeability zones water into the low permeability zone water, it is feasible to extract 0.5 gpm to determined compliance with the monitoring levels.

Comment 267 : A Commentor asked how long monitoring will be maintained? [SRA-W]

Response: Monitoring of the SRPA will be performed until the Agencies determine that there is no longer a risk that the MCLs will be exceeded after 2095. This will be evaluated during the 5-year reviews.

Comment 268 : A Commentor stated that it didn't look as if there was an implementable treatment technology if the groundwater has to be cleaned and asked what efforts were going forward throughout the DOE complex to address this lack? [SRA-W]

Response: No treatability studies have been conducted to determine the cost and performance data for treating low level I-129 contaminated groundwater. If extraction and treatment is necessary, via ion exchange, we will perform these necessary studies to determine a cost-effective solution to treating the groundwater. If we choose to go forward with evaporation and residuals management, this approach should not present a technical impracticability concern, especially given the small flow rates anticipated.

Comment 269 : A Commentor asked several questions concerning the preferred alternative and I-129 cleanup. A concern was that the peak I-129 concentrations in the aquifer are predicted (in the computer model) to still be relatively high in year 2095, trapped in interbed sediments (a natural water filter) with permeabilities far lower than the surrounding basalt aquifer. The Proposed Plan does not say whether or not the interbed will be the sole focus of this monitoring plan. [JM-W]

Response: Modeling predicted that the long-term levels of I-129 above the MCL would be found in the sedimentary interbed in the aquifer, because this material impedes the flow of contaminated groundwater relative to flow in the bedrock fractures. Monitoring wells will be sampled during construction to determine the zone or zones of highest contaminant concentrations. The zone or zones with the highest concentrations will be monitored long-term to determine remedy effectiveness. It should be noted that a sustainable extraction rate of at least 0.5 gpm will be used for determining if the contamination exceeds the action levels.

Comment 270 : A Commentor asked the Agencies to not put this I-129 based aquifer contingent remediation plan into a record of decision (ROD) that could force: (1) current decision makers to spend money drilling wells and placing well screens in the aquifer in low permeability zones that will be useless for monitoring contaminant migration from the INTEC facility. Monitoring wells should be screened at depths that will likely be used by future residents so that useful data can be collected to support computer model calibration and reliable predictions of future contaminant concentrations; and (2) future decision makers to spend money on very likely ineffective and unnecessary treatability studies and possibly an I-129 remediation project. [JM-W]

Response: Monitoring under this ROD is to determine remedy effectiveness, not investigative information for future uses. Future users may screen their well within any water bearing zone in the SRPA. The monitoring will be conducted in the highest contamination zone(s) whether the contamination occurs in the basalt or interbed layers at a sustainable extraction rate of at least 0.5 gpm, which could be used by a future resident. The treatability studies and subsequent aquifer remediation only will be implemented if the concentrations in the highest zone exceed the action levels at a sustainable extraction rate of at least 0.5 gpm and the extent of the hot spot is sufficient in areal extent to warrant removal.

Comment 271 : A Commentor requested that the Agencies put into the ROD that monitoring of I-129 is needed to confirm that it is not a COC. The Commentor believed that the detection of relatively high I-129 concentrations in the aquifer will negate the hypotheses upon which the current computer model is based and require that the I-129 source and its transport in the subsurface be reevaluated in light of the new information. The Commentor stated that new predictions will have to be made at that time to estimate the I-129 concentrations expected after year 2095 and that Aquifer remediation decisions should be based on the results of this future analysis. [JM-W]

Response: The Commentor is discussing I-129 as a COC in source areas at OU 3-13. The source of the I-129 in the aquifer is that it was disposed of directly into the aquifer using the injection well. Impacts of the I-129 from surface and subsurface releases are not significantly adding to the I-129 plume and long-term aquifer impacts. Refinement of the aquifer COCs within the INTEC fence line from source areas like the Tank Farm soils and associated risks will be conducted under OU 3-14.

Comment 272 : The INEEL CAB recommended that the DOE continue its efforts to find viable and effective remediation alternatives before implementing “pump and treat” strategies for the aquifer contamination. [CAB-W]

Response: Pump and treat is an effective technology for ground water cleanup in this case, where the COC’s are highly soluble and attenuate only slightly on the aquifer sediments, which is the case for I-129. Pump and treat technologies are less effective when working with non-aqueous wastes or highly attenuated constituents like Cs-137.

Comment 273 : The INEEL CAB Board stated that it understood that extraction of groundwater (from the zone of influence in the SRPA) will take place only if contaminant levels are found to exceed trigger levels. But they doubted that the “pump and treat” approach would be effective under the circumstances that exist at WAG 3, and encouraged the Agencies to continue their efforts to identify other viable alternatives. The costs associated with pump and treat strategies jeopardize other valuable programs. [CAB-W]

Response: Modeling predicts that the long-term levels of I-129 above the MCL will be found in the sedimentary interbed in the aquifer, because this material impedes the flow of contaminated groundwater relative to flow in the bedrock fractures. The zone or zones with the highest concentrations will be monitored long-term to determine if remedial action is warranted. If so, then a pump and treat approach will be taken to remove sufficient contaminated groundwater to achieve aquifer restoration by the year 2095. It should be noted that only zones capable of sustaining an extraction rate of at least 0.5 gpm will be pumped as these are the zones that could be used in the future for providing drinking water. As I-129 is highly soluble in groundwater and attenuates only slightly on the aquifer sediments, extraction of ground water will also result in the removal of the I-129 hot spots. We appreciate the concerns that the CAB has regarding other uses of pump and treat technologies. It is correct that they are less effective when working with non-aqueous wastes or with highly attenuating constituents (e.g., Cs-137).

C.6. Group 6: Buried Gas Cylinders

Comment 274 : A Commentor asked that the mechanisms which will cause “over-pressurization” in the buried cylinders be explained as the cylinders are buried and experience very small changes in temperature. Further the Commentor asked that if “over-pressurization” cannot occur, the Agencies needed to identify the imminent safety hazard associated with this site. [C-W]

Response: We apologize for our poor choice of words. Over-pressurization is not the best term we could have used to describe the problems at these sites. Corrosion of the cylinders will result in the cylinders not being able to maintain or handle the internal pressure. As a result, the cylinders will then leak their contents into the environment. In the case of Site CPP-84, the cylinders are currently buried, but have been uncovered by past flooding conditions. Site CPP-94 cylinders are not completely buried. The major safety hazard associated with these sites is the **unintentional** disturbance and possible acute impacts.

Comment 275 : A Commentor stated that regarding the Buried Gas Cylinder Sites, the description in no way confirmed any potential for release of contaminants that pose a risk to human or ecological species health and questioned why is this site in this Proposed Plan? [U-W]

Response: The typical CERCLA risk from these sites is following the release of the cylinders contents. As these sites represent a "threat of release" to the environment, these sites were added to the FFA/CO. Currently, there are no existing INEEL programs, other than CERCLA, for dealing with these cylinders. The major safety pathway for the cylinders is from disturbing the cylinders without adequate safety controls. The disturbance, intentional or accidental, will be an acute hazard. These cylinders are not likely to explode or over-pressurize, but these are possible scenarios. Neither scenario is considered an imminent event.

C.6.1. Group 6 Description

Comment 276 : A Commentor asked the Agencies to note that the acetylene cylinders may contain liquid acetone used to dissolve the acetylene gas and stated that based on the site description, the site is not well characterized and risk to human health and the environment had not been determined. The Commentor suggested that this be done prior to conducting a remedial action. [C-W]

Response: We, unfortunately must disagree with the Commentor. The analysis and evaluation conducted on the Buried Gas Cylinder sites (Group 6) was based on the information available to us. The general characteristics of the material (waste) contained in the cylinders is known. The risks from these sites is not a traditional CERCLA risk (chronic exposure), but more like that risk posed by unexploded ordnance (acute risk). This acute risk will occur from disturbing the buried gas cylinders. Further characterization involves the removal of the cylinders and proper disposal, which requires characterization, which is what the remedial action calls for.

Comment 277 : A Commentor asked the Agencies to note that if HF is in the cylinders then it is a RCRA listed waste. [C-W]

Response: The Commentor is correct that HF can be a listed hazardous waste. Treatment will be utilized to render the HF nonhazardous in compliance with ARARs.

C.6.2. Group 6 Alternatives

Comment 278 : A Commentor stated that at Page 40, Alternative 2, of the Proposed Plan it states that the alternative will also include initial site characterization and questioned why characterization was being performed after the ROD rather than during the RI/FS. [C-W]

Response: The analysis and evaluation conducted on the Buried Gas Cylinder sites (Group 6) was based on the information available to us. The general characteristics of the material (waste) contained in the cylinders is known. The risks from these sites is not a traditional CERCLA risk (chronic exposure), but more like that risk posed by unexploded ordnance (acute risk). This acute risk will occur from disturbing the buried gas cylinders. Further characterization involves the removal of the cylinders and proper disposal, which requires characterization, which is what the remedial action calls for. The sites have been sufficiently characterized to develop remedial action alternatives. The characterization activities described under the alternative are necessary to implement the remedy, not characterize the site for risk assessment purposes.

Comment 279 : A Commentor remarked that there was no doubt in his my mind that Alternative 2, dig it up and do the right thing, is still the only thing that should be done. [DK-TT]

Response: We thank the Commentor. The best and most cost effective alternative for Group 6 is the preferred alternative (Alternative 2: removal, treatment and disposal).

C.7. Group 7: SFE-20 Hot Waste Tank System

Comment 280 : A Commentor stated that the Proposed Plan had a conflicting statement concerning when SFE-20 Hot Waste Tank System was taken out of service. [C-W]

Response: We are sorry for the confusion. The tank system was removed from service in 1976. The 1977 date shown in the Proposed Plan was a typographical error.

C.7.1. Group 7 Description

Comment 281 : A Commentor questioned the risk basis for taking action on the SFE-20 Hot Waste Tank System since there was no exposure pathway as the tank is contained within a vault, and the “risk of release” is certainly small. [C-W]

Response: The SFE-20 Hot Waste Tank System is listed as a release site on the FFA/CO. The tank contents represent a threat of release to the environment, which is within the purview of CERCLA. The tank contents will eventually leak out of the tank and into the tank vault. During the 1984 investigation, there was evidence that water had infiltrated into the vault, which shows that water which leaked into the vault could also leak out of the vault. Soils beneath the SFE-20 Hot Waste Tank System are considered part of the release site and will be dealt with as part of the remedial action. Further, detailed, characterization of the tank contents is the first activity in the selected remedy (Alternative 4: Removal, Treatment, and Disposal). Based on the available information and analysis conducted, there is sufficient information to select a remedy under CERCLA for this site.

Comment 282 : A Commentor stated that the SFE-20 tank had not been shown to be a release site, or that of an imminent release. The Commentor thought that the tank held hazardous waste and should have been placed on the RCRA Part A application or addressed under the D&D program. [C-W]

Response: The SFE-20 tank and associated structure are a source term that threatens the environment, the SRPA in particular. Since the tank was abandoned prior to the effective date of RCRA application to mixed wastes, the SFE-20 Hot Waste Tank System is listed as a release site on the FFA/CO. The tank contents will eventually leak out of the tank and into the tank vault. Based on the available information and analysis conducted, there is sufficient information to select a remedy under CERCLA for this site. The tank contents are not known to have listed waste constituents, but there may be characteristic concentrations of other hazardous constituents.

C.7.2. Group 7 Alternatives

Comment 283 : A Commentor stated, “Once again, DOE fails to correctly classify the waste in SFE-20 tank in a blatant attempt to circumvent regulatory requirements. The RI/FS sample data of the tank, (see table below) shows clearly that the tank contents (liquid and sludge) as well as the tank concrete vault contents meet the definition of mixed transuranic (TRU) waste, and by regulatory definition, it must go to a deep geologic repository. Grouting (mixing with cement) as proposed by DOE, is a thoroughly discredited disposal method B tried and failed at Hanford.” [CB-W]

Response: Preliminary information supports that concentrations of TRU may be high enough to require disposal of the Tank’s contents at WIPP. However, due to the radiological hazards and access restrictions, we have not completed characterization of this tank, which will be required even if we elected to leave the tank in place. Under evaluation of alternatives, we concluded that Alternative 4

(Removal, Treatment, and Disposal), which includes characterization activities, best satisfies the evaluation criteria. The Tank and tank contents will be disposed of in compliance with ARARs.

Comment 284 : One Commentor strongly disagreed with our recommendation to remove VES-SFE-20 in its entirety. Several reasons were given which are answered separately herein. [TW-W]

Response: The Commentor expresses concern over the accuracy of our cost estimates and the consistency of our decisions. We appreciate the time and effort taken by the Commentor in supporting his position and have responded directly to each of the specific concerns stated.

Comment 285 : A Commentor stated that the concept of clean closure VES-SFE-20 did not make sense for the simple reason that it is only a few yards from CPP-603, which may very well be left in place. "Why spend \$4.6M to totally remove VES-SFE-20 when a much larger facility is being left in place? The contamination levels in VES-SFE-20 are minor compared to CPP-603, and any groundwater effects from the VES-SFE-20 facility will be negligible, especially if the liquids are removed. Grouting and leaving the VES-SFE-20 building will provide more than adequate protection and permanence." [TW-W]

Response: Preliminary information supports that concentrations of TRU may be high enough to require disposal of the Tank's contents at WIPP. Due to the radiological hazards and access controls, we have not completed characterization of this tank, which will be required even if we elected to leave the tank in place. Successful grouting will also require perpetual long term monitoring and maintenance. For the SFE-20 Hot Waste Tank System, complete removal, treatment, and disposal is the most cost effective and risk reducing option evaluated. In addition, it is significantly less costly to completely remove the facility and waste than to close the facility in place with continued institutional controls and monitoring. Based on this we concluded that Alternative 4 (Removal, Treatment, and Disposal), best satisfied the evaluation criteria.

Comment 286 : A Commentor stated that the capital costs did not make sense for Group 7, questioning how could the Agencies show capital costs of \$5M for Alternative 2, which is essentially filling with grout and covering with dirt, and \$4.8M for Alternative 3, which consists of removing the tank liquid contents and then filling with grout? It seemed to the Commentor that Alternative 2 should be less than Alternative 3 since it did not include the costs for removal of the liquids. [TW-W]

Response: In the case of Alternative 2, the facility will be filled with grout and an engineered containment structure (cap), consisting of multiple layers constructed over the area. This engineered containment structure will be designed and constructed for long-term (+1,000 year) protection. Although a small earthen barrier would be relatively cheap, it would not be an ARAR-compliant engineered barrier designed to protect against future releases to the underlying aquifer. The difference in cost between the alternatives is due to cap design and construction. For Alternative 3, the liquid will be removed prior to grouting and no engineered containment structure will be required. However, both of these alternatives will still require long-term institutional controls and surveillance and maintenance activities.

Comment 287 : A Commentor asked why the cost for Alternative 4, which includes removal of the liquid and then total removal of the entire building, (\$4.6M) is less than Alternative 3, which does not involve removal of the building? The Commentor further asked if Alternative 4 included any costs for handling/burial of the contaminated materials? [TW-W]

Response: A cost estimate breakdown is provided in Appendix A of the FSS Report. This document is referenced in the Proposed Plan and available for inspection as part of the Administrative Record. The costs for removal and disposal of the facility and associated structures for the SFE-20 Hot Waste Tank System were included in the cost estimate for Alternative 4. Alternative 4 involves the complete removal

and treatment of the SFE-20 Hot Waste Tank System, so no long-term surveillance and monitoring will be required. For Alternative 3, with waste being left in place, long-term surveillance and monitoring is required.

Comment 288 : Concerning Page 43, Alternative 4, of the Proposed Plan, a Commentor asked what types of treatment will the debris (steel and concrete) be subject to and if the treatment would be conducted on site? [C-W]

Response: Treatment may be necessary to meet the ICDF acceptance criteria for the emptied tank and structure. The treatment (stabilization, solidification, or sizing), if necessary, will be conducted within the WAG 3 AOC, which is on-site.

Comment 289 : A Commentor asked, "What are the levels of alpha contamination in this waste; the debris? Will these alpha levels be acceptable at the ICDF; at Envirocare? The Commentor went on to say that if the tank was left in the Proposed Plan, then the Agencies needed to be much more specific about what will be done with the waste. [C-W]

Response: Sampling of the sludge in the tank has shown TRU constituent concentrations exceeding 90 nCi/g. The concentrations of the contaminants in the debris are considerably lower. Some debris materials from this site may be acceptable for disposal at ICDF. The concentration of contaminants for this material are probably higher than the acceptance criteria for Envirocare without treatment (very high (gamma) radiation field). The ICDF will accept <10nCi/g TRU wastes. Depending upon the contaminant levels, in the removed wastes, pre-treatment may be required prior to disposal either on or off-site.

Comment 290 : A Commentor was supportive of the proposal to dig up, dispose of the tank, dispose of the contents of the tank and the sludge and asked what the time schedule was on that [DK-TT]

Response: Concerning the time schedule for implementation of the alternative, we have not developed our scope of work for implementing the preferred alternatives identified in the Proposed Plan, instead concentrating on preparing the ROD and this Responsiveness Summary. However, a rough guess would suggest completion of the alternative by the year 2008.

Comment 291 : One Commentor liked the removal option because it's was kind of a prototype or a pilot of what can be done with the Tank Farm. [DK-TT]

Response: The decision of the waste within the tanks at the Tank Farm will be evaluated by the Idaho HLW & FD EIS. The actual closure activities will be conducted in compliance with an approved HWMA/RCRA closure plan for the tank and associated system. The information gained from the Group 7 remediation will be used during the closure of the Tank Farm tanks where possible. The disposition of the soils within the Tank Farm area will be determined under the Tank Farm RI/FS (OU 3-14).

D. OTHER ISSUES

D.1. Tank Farm

Comment 292 : A Commentor was concerned that an environmental impact statement be prepared on the Tank Farm, as it is the major contamination source on all of INEEL. [DK-TT]

Response: It is recognized that the largest amount of contamination at INTEC occurs in the Tank Farm area. The ultimate disposition of the waste in the INTEC Tank Farm tanks is being evaluated in the Idaho HLW & FD EIS. In addition, this EIS is evaluating the disposition of the tanks within the INTEC Tank Farm. Evaluation of the soils surrounding the INTEC Tank Farm is being further investigated and evaluated under the OU 3-14 RI/FS project. With CERCLA being functionally equivalent to NEPA, the RI/FS will meet the needs of an EIS under NEPA and no EIS process will be conducted for the Tank Farm soils. Several remedial action alternatives for dealing with the soil will be evaluated under the OU 3-14 RI/FS. Concerning the schedule, the INTEC Tank Farm is an active facility and implementation of the final action will need to be conducted following the closure activities. Prior to the final disposition of the INTEC Tank Farm area, actions may be taken to reduce the impacts on human health and the environment. These actions will be continued until the final actions are completed on the INTEC Tank Farm area.

D.2. Decontamination, Decommissioning, and Dismantlement

Comment 293 : A Commentor inquired if implosion-in-place was a likely alternative for some of the more contaminated buildings at the Chem Plant and though that although, residual risk "belongs" to D&D rather than ER, it was appropriate to discuss it in the Proposed Plan. [SRA-W]

Response: Evaluation of alternatives for the disposition of facilities at INTEC is not part of the OU 3-13 project. The disposition of certain INTEC facilities is, however, being evaluated under the Idaho HLW & FD EIS. Implosion or grouting in place is an alternative being evaluated. The intent of the OU 3-13 project is to reduce the risk to the environment at INTEC to acceptable levels. The residual risk from the INTEC facilities closed in place will need to be factored into the cumulative risk and the cumulative risk will need to be maintained at an acceptable level.

Comment 294 : A Commentor asked what the schedule was for transfer to EM-60 of facilities whose missions have ended (e.g., ICPP 601)? [SRA-W]

Response: When the mission for a facility at INEEL has ended and no future mission is identified, the facility ownership is transferred to the EM-60 organization for facility deactivation, as the Commentor stated. Following the deactivation activities, ownership of the facility is transferred to the EM-40 organization for final disposition (dismantlement). Occasionally, the EM-60 conducts activities on a facility to include the final disposition. For example, the CPP-601 facility is currently under EM-60 ownership.

Comment 295 : A Commentor was concerned that the Agencies stated that the selected alternative [for Group 2 soils] is consistent with expected D&D activities. Since when is this a requirement of CERCLA? Do the Agencies expect these D&D activities to be conducted as part of CERCLA? If so, what are the decision documents the public should expect to review, prior to these activities? [C-W]

Response: Closure of the facilities at INTEC will be designed and implemented to remain protective of human health and environment, in particular the SRPA. As the remediation of the SRPA is being conducted under CERCLA, impact to the aquifer need to be coordinated with the CERCLA Program. Aspect or parts of INTEC facility closures may end up being within future CERCLA projects. If activities for INTEC facility closures are conducted under CERCLA, the appropriate documents will be developed and public participation activities will be conducted.

D.3. Pit 9

Comment 296 : A Commentor was concerned that risk calculations were not performed to compare the risks between below ground disposal and above ground storage. As an example, the Pit 9 ROD, was cited where the Agencies admitted in writing that they had never done them. [PR-TT]

Response: Issues dealing with Pit 9 are not within the scope of this project. However, concerning storage of waste above ground, the waste being considered for the ICDF is a large volume with relatively low concentrations. The wastes would need to be containerized resulting in a very large facility to store them. For example, the Group 3 soils alone would represent over 300,000 55-gal drums or over 17,000 - 8ft x 4ft x 4ft boxes. In addition, the waste will have to be monitored periodically. Both of these operations will increase the amount of exposure that workers will receive. In addition, there will be an increase in the amount of exposure that the public could be exposed to. With containment above ground the containers will be required not to leak any material and this will require periodic repackaging. Based on these issues, containment in an above ground facility does not make sense from either a risk or economical standpoint.

Comment 297 : A Commentor questioned the Agencies' assertion that storage above ground is more dangerous than disposal below and compared the issue to work at Pit 9. [PR-TT]

Response: Issues dealing with Pit 9 are not within the scope of this project. Wastes stored above ground have to be packaged and monitored periodically. Both of these operations will increase the amount of exposure that workers will receive and potentially the public. For disposal below ground, in an engineered facility, there is only one probable exposure route (contaminated groundwater ingestion). The disposal cells at ICDF will be designed, constructed, operated, and closed with protection of the SRPA as a primary objective.

D.4. Other Disposal Facilities

Comment 298 : A Commentor was concerned that previous "cleanup" actions were just consolidation of mixed LLW into old waste percolation ponds and covering it over. The unlined Warm Waste Percolation Pond at the INEEL Test Reactor Area, Test Area North, and Argonne-West are examples of this practice. The Commentor further stated that the RCRA Subtitle C landfills have double liners, leachate detection/collection systems, and impermeable caps. Further, the Commentor stated that the Nuclear Regulatory Commission restrictions prohibit citing radioactive waste disposal dumps on 100 year flood plains. [NRC 10 CFR ss 61.50] [CB-W]

Response: Much of what the Commentor says we support. However, the Commentor is incorrect concerning the classification of wastes disposed of in the Warm Waste Pond that was used to consolidate non-RCRA radioactive waste. The Commentor may be confusing the Warm Waste Pond with the Chemical Waste Pond, which did receive RCRA wastes and will be closed in accordance with the applicable RCRA closure requirements. On another point, no remedial action has been taken at the ANL-W pond, and the pond is subject to RCRA closure, outside the scope of this action, so we are uncertain as to what the Commentor was referring to. Concerning the Test Area North (TAN), RCRA hazardous waste disposal did occur into an old injection well, directly into the aquifer. Remediation, under the OU 1-07B ROD, is underway to restore the aquifer to drinking water quality. Lastly, the Nuclear Regulatory Commission (NRC) regulations are not ARARs for DOE projects, but construction of new disposal sites are subject to the 100 year floodplain criteria, and this is an ICDF design requirement.

D.4.1. Radioactive Waste Management Complex (RWMC)

Comment 299 : A Commentor asked that the Agencies consider the issue of using the existing radioactive waste management complex, which does currently dispose of low-level radioactive waste in a facility on site. The Commentor supported closing the RWMC facility as soon as possible. [SR-TB]

Response: The operation and management of the RWMC is outside the scope of this project. Further, the RWMC does not have sufficient capacity to dispose of the soil and debris considered for the ICDF. In addition, the RWMC is over SRPA and not an engineered facility designed to accept and dispose of waste with both radionuclide and non-radionuclide constituents, as the ICDF will be. Since a considerable amount to the waste proposed for the ICDF contains both radionuclide and non-radionuclide constituents, the RWMC facility would be unsuitable for the disposal of MLLW.

D.5. Idaho High Level Waste and Facilities Disposition Environmental Impact Statement (Idaho HLW & FD EIS)

Comment 300 : A Commentor stated that it was their understanding that the HLW stabilization EIS will “cover” decontamination and decommissioning of the ICPP buildings and asked if it will include a timeline? And if yes, how will it relate to 2045, when, according to the plan, operations will end at the Chem Plant? [SRA-W]

Response: The Idaho HLW & FD EIS will evaluate various scenarios for the disposition of INTEC facilities dealing with the generation, treatment, storage, and disposal of HLW. In the evaluation of the disposition alternatives, the expected implementation time frames are also evaluated in the Idaho HLW & FD EIS. As the HLW at INTEC is required to be “road ready” by 2035, it was assumed that all treatment of the HLW was completed by 2035. A period of 10 years was assumed to be needed for the disposition of the necessary INTEC facilities, which results in the year 2045. Depending on the decisions made for the Idaho HLW & FD EIS, the timeframes for the disposition of INTEC facilities could change.

Comment 301 : A Commentor stated that it was appropriate that at least a brief discussion of the alternatives for HLW stabilization appear in the Proposed Plan. [SRA-W]

Response: Discussion of alternatives being considered under the Idaho HLW & FD EIS are outside the scope and not evaluated in the OU 3-13 - RI/FS. As such, no discussion of the Idaho HLW & FD EIS alternatives is included in the Proposed Plan or ROD.

Comment 302 : A Commentor asked, “Will the EIS deal with the New Waste Calciner? Where does the Calciner fit in?” [DK-TT]

Response: Treatment of the liquid waste at INTEC contained in the Tank Farm is not within the scope of this project, but is covered under the state HWMA/RCRA program and the Governor’s Agreement. High level wastes have previously been treated with the New Waste Calcining Facility (NWCF). The Idaho HLW & FD EIS is currently evaluating alternatives to deal with the liquid waste in the High Level Waste Tank Farm.

Comment 303 : The INEEL CAB inquired whether under the preferred alternative for contaminated perched water under WAG 3, the existing percolation ponds will be removed from service and replaced with “like for like” replacement ponds or service water discharge to the Big Lost River. The INEEL CAB recommended that additional feasibility studies be conducted before determining how to proceed with replacement. [CAB-W]

Response: The current discharges to the existing percolation ponds are contributing to the migration of contamination through the vadose zone. In evaluating alternatives to deal with this impact, the OU 3-13 FS and FSS Reports considered eliminating the existing percolation ponds and replacing them with a similar facility. The major emphasis of the ROD is to eliminate the current discharge contributing to the perched ground water and mobilizing contaminants into the SRPA. A new set of percolation ponds is the simplest and fastest way to cease the discharge and minimize the impacts on the SRPA. We also support the concept of looking at alternatives to like-for-like replacement. We hope that ways can be found to reduce water usage at INTEC, prior to the construction of the replacement ponds. However, we cannot stop the use of the existing ponds without establishing a known and reliable alternative to managing the 2 MGD wastewater.

Comment 304 : The INEEL CAB stated that in order to fairly assess the feasibility of replacements to the percolation ponds, the Agencies should more fully characterize the wastewater that currently goes into the percolation ponds and develop estimates of volumes and chemical composition for wastewater that will need to be managed once the existing ponds are taken out of service. The INEEL CAB recommend that recycling of water be maximized and encourage the treatment of residual wastewater to reduce risks. [CAB-W]

Response: We agree that there are gaps in the data characterizing the discharges of service waste at INTEC to the percolation ponds. To resolve this issue, a sampling program has been initiated to collect the necessary samples and adequately characterize the waste. This information will be used determine treatment requirements on the discharge. Resulting from these sampling and analysis activities will be the chemical (radionuclide and nonradionuclide) composition and estimated volumes of service waste discharged. An evaluation of potential disposal methods was conducted and is in the Administrative Record. The result of this evaluation was the decision to select replacement percolation ponds for dealing with the service wastewater. The criteria for discharge into the new replacement percolation ponds will limit the impacts of contamination on the environment.

D.6. Unconfirmed Information at INTEC

Comment 305 : A former ICPP workers recalled stacking sandbags six feet high around the plant during a spring flood about ten years ago. [CB-W]

Response: The Commentor is evidently referring to a flood threat near the INTEC “about 10 years ago.” While no flooding threat has occurred at the facility in the last 10 years, it will seem that the events referred to by the Commentor are the flood threats during 1983-1984, or 1957-1958. As a result of these flood threats, DOE took action to mitigate the flooding potential. Following the 1957-1958 flood threat, the diversion dam near the RWMC was constructed. After the 1983-1984 flood threat, the diversion dam was raised. However, we are unaware of any actual flooding at INTEC approximately 10 years ago.

D.7. Mobility of Plutonium

Comment 306 : A Commentor inquired about the Nevada study on Plutonium migration and it's binding with clay. In the Nevada study, the Pu was bound to the clay and submicron particles floating in sediment in the water and was mobile, which is proof that it should not be buried. [PR-TT]

Response: We recognize that plutonium can migrate in the environment through soils and basalt. There are several mechanisms (ionic and colloidal) that control the migration of plutonium. Evaluation of the plutonium migration at INEEL uses conservative parameters. Also, the ICDF will be designed to minimize the generation of leachate, and restricted in the concentrations of hazardous substances like

plutonium that it can receive, thus prevent the migration of contaminants like plutonium to the SRPA at concentrations that present an unacceptable risk.

D.8. Nuclear Energy

Comment 307 : A Commentor wanted the Agencies to get on with this reduction of risk to our unborn generations to follow. Stop promoting this risky energy source and military deterrent around the world. [RK-W]

Response: Cleanup activities at INEEL, including both the environmental restoration and waste management programs, are intended to reduce the risk to human health and the environment. There are current ongoing projects to reduce the risk from waste in storage and previous contamination. Implementation of this ROD will quantify and reduce the risk from various areas at INTEC to acceptable levels. The CERCLA actions are aimed at cleanup from past operations and do not promote energy or power generation from any source. Since part of the DOE's mission is the research and development of nuclear energy sources the cleanup activities must consider these kind of missions as part of cleanup responsibilities.

Comment 308 : A Commentor stated, "While I don't oppose foreign countries sending us the spent nuclear waste from peaceful use of the atom. It is only because it is the lesser of two evils. Let this waste be used by a mad man to build a nuclear bomb or try safe containment, that the INEEL has not been able to do." [RK-W]

Response: Some spent nuclear fuel from foreign nations is being received at INEEL for temporary storage. This foreign spent nuclear fuel will eventually be packaged for final disposition in an approved disposal facility. While there has been contamination as a result of operations (accidental and past waste management practices) at INTEC, the storage of spent nuclear fuel at the INEEL has been and will continue to be safe.

Comment 309 : A Commentor wanted help in getting the permanent repository for high-grade nuclear waste open. [RK-W]

Response: We believe that the Commentor is referring to the High Level Waste Repository. There are currently two permanent repositories being considered by the Department of Energy. The first repository will deal with TRU waste (waste containing transuranic constituents concentrations of 100 nCi/g or greater). This facility is referred to as the WIPP and is located near Carlsbad, New Mexico. The second repository will deal with commercial and DOE produced spent nuclear fuel and DOE produced HLW. The proposed facility is referred to as Yucca Mountain and is located in western Nevada. Progress is being made to open both of these facilities to accept the appropriate waste materials. The DOE is responsible for both repositories and is attempting to open both repositories as soon as possible.

D.9. Research and Development

Comment 310 : A Commentor wanted support for more research to support alternative renewable energy sources (i.e., solar voltaics, superconductivity at lower temps). [RK-W]

Response: It is recognized that research and development of technologies is needed for the future. There are efforts to bring new missions to the INEEL. The technologies that the Commentor is referred to may end up among the technologies undergoing further and future research and development at the INEEL.

D.10. Idaho Space Port

Comment 311 : A Commentor wanted DOE to aggressively pursue the Idaho Space Port location at INEEL. [RK-W]

Response: The INEEL is supporting the State of Idaho in pursuing a Space Port located at the INEEL. There are several other states also trying to secure the Space Port. Selection of the location of the Space Port will be determined in the future. The Space Port is a privatized venture and not specifically under the authority of the DOE.

D.11. INTEC Operations

Comment 312 : A Commentor believed that a systematic review of operations, including SNF and HEU throughout history and a mass balance review, is required to understand the status of the INTEC facility with adequate rigor to undertake the cleanup safely. If necessary, the DOE should prepare a classified appendix to cover these issues. "If possible, any classified information should be reviewed to determine whether the restrictions on public access (including UNCI) continue to be required. DOE headquarters committed to releasing a public document on HEU inventories, comparable to "Plutonium: The First 50 Years: in 1997." [SRA2-W]

Response: There is adequate historical information available concerning historical operations and activities at INTEC. We agree with the Commentor that there is a lack understanding by the public concerning the operations at INTEC. Generally, the uranium extracted during the reprocessing operations was sent to the Savannah River Site (SRS). At SRS, the uranium was generally used in SRS nuclear reactors to produce both tritium (H-3) and plutonium. As part of the INEEL cleanup activities, there is an ongoing program to identify and remove/reduce unstable nuclear material from INEEL facility. For example, a recent project at INTEC removed uranium from the ROVER facility located in CPP-640. Mass balances have been historically maintained during operations at INTEC, including waste management activities. In both the Spent Nuclear Fuel (SNF) EIS and Idaho HLW & FD EIS, mass balances are taken into account when evaluating the waste volumes, treatment, disposal, and other criteria. Also, the CERCLA project considers mass balances. No appendix is planned to be developed (classified or unclassified) containing information on SNF and Highly Enriched Uranium (HEU). Currently, there is no report developed on HEU inventories. However, DOE is in the process of developing a report.